



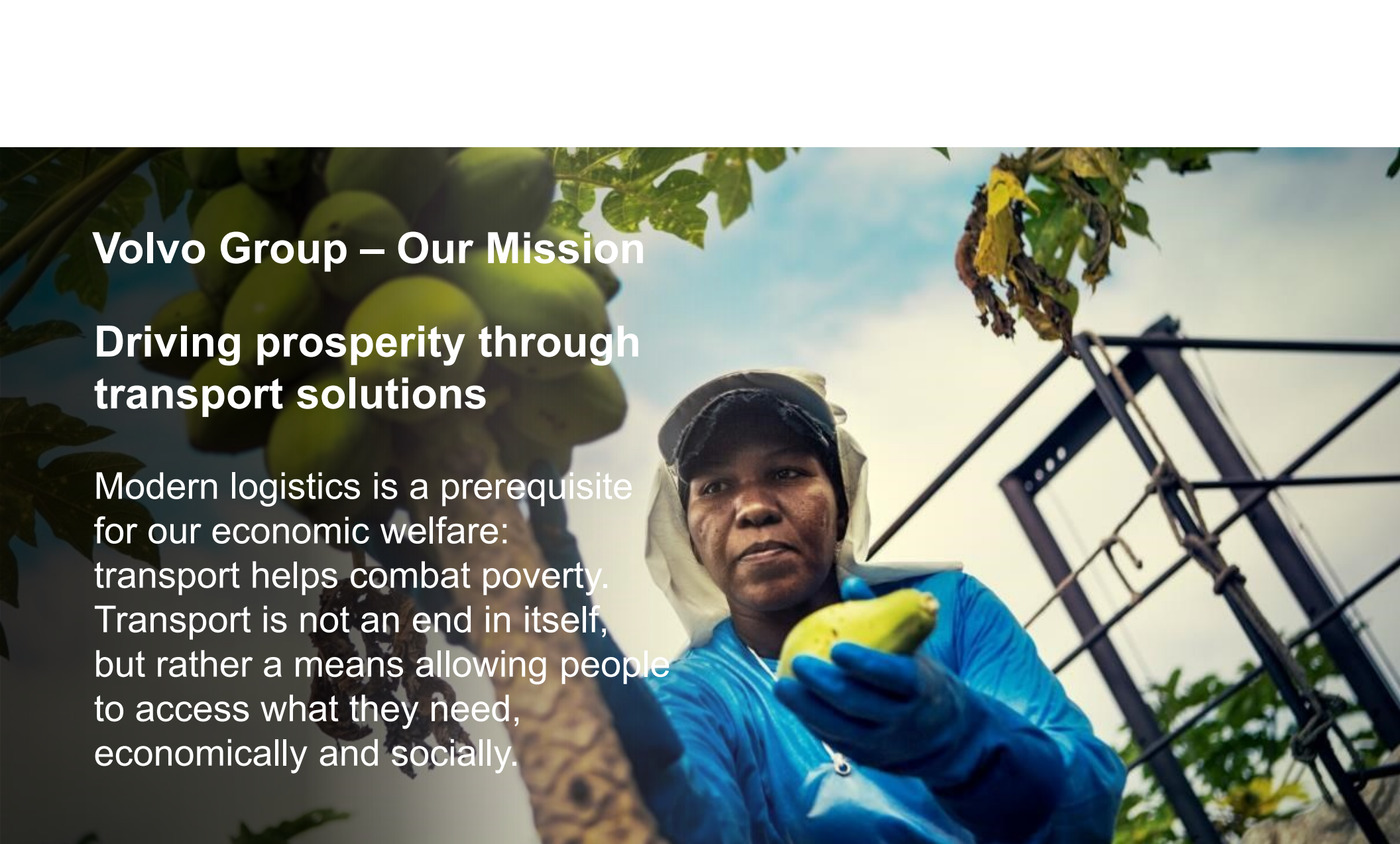
North Carolina House Select Committee on Transportation

Re: Platooning Demonstration on NC-540

Susan Alt – Senior Vice-President Public Affairs
Franklin Josey – Project Manager Vehicle Automation
November 8, 2018

Agenda:

- Brief Introduction To Volvo
- Volvo Group on Automation
- Platooning & Demonstration on NC-540



Volvo Group – Our Mission

Driving prosperity through transport solutions

Modern logistics is a prerequisite for our economic welfare: transport helps combat poverty. Transport is not an end in itself, but rather a means allowing people to access what they need, economically and socially.

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Volvo – NC-540 Demonstration

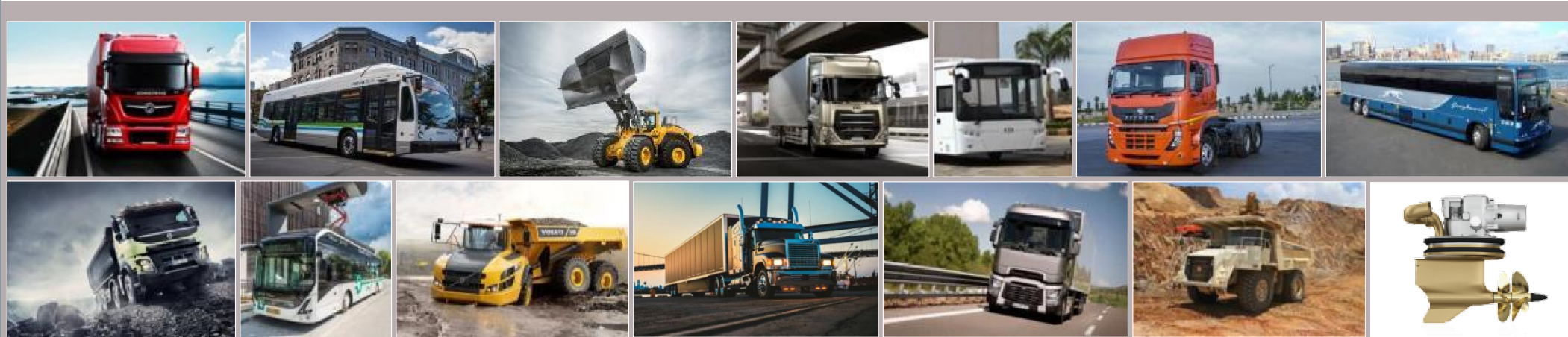
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Volvo Group - Products

We are one of the world's leading manufacturers of trucks, buses, construction equipment and marine and industrial engines.

We also provide complete solutions for financing and service.



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Volvo Group – Brands

Our brand portfolio consists of Volvo, Volvo Penta, UD, Terex Trucks, Renault Trucks, Prevost, Nova Bus, Mack and Arquus.

We partner in alliances and joint ventures with the SDLG, Eicher and Dongfeng brands.

By offering products and services under different brands, we address many different customer and market segments in mature as well as growth markets.



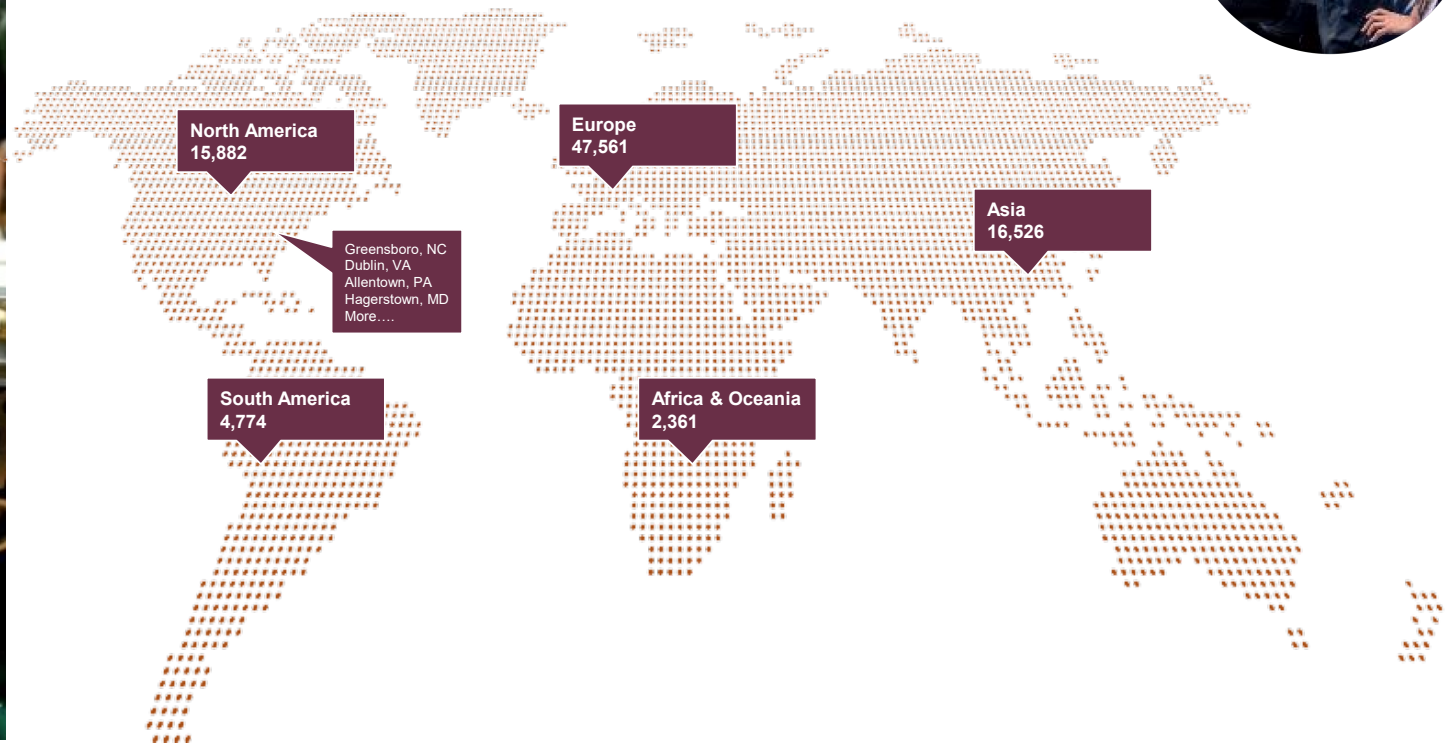
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Volvo Group - Global & Local Presence



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Automation will redefine transportation

Will be used where it adds value for customers and society:

- Productivity
- Safety
- Energy efficiency
- Transport efficiency

Will be introduced gradually over time.

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Major benefits with automation

– for customers and society



Productivity



Safety



Energy efficiency

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Different solutions for different needs



Automation in confined areas



Urban automation



On-road automation

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Industry and society

- need to work together

Standards, rules and regulations



Cyber security



The role of the driver



Social acceptance



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Safety – A Volvo Core Value – A Worthy Goal

BREAKING NEWS

October 05, 2016

DOT Aims for Zero Traffic Deaths Within 30 Years



Three DOT agencies and the National Safety Council have teamed up to launch a new initiative with the goal of eliminating traffic deaths on U.S. roads within the next 30 years, and truck safety is one of the targeted areas of the effort.

[Read Full Story](#)

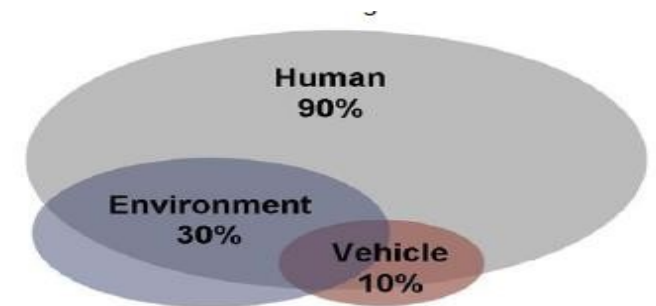


Figure 3: Frequency of contributing accident causes.

Volvo Group Safety Vision

Zero accidents with Volvo Group products

THERE IS ONLY ONE
ACCEPTABLE NUMBER OF
INJURIES AND DEATHS
IN THE TRAFFIC

ZERO

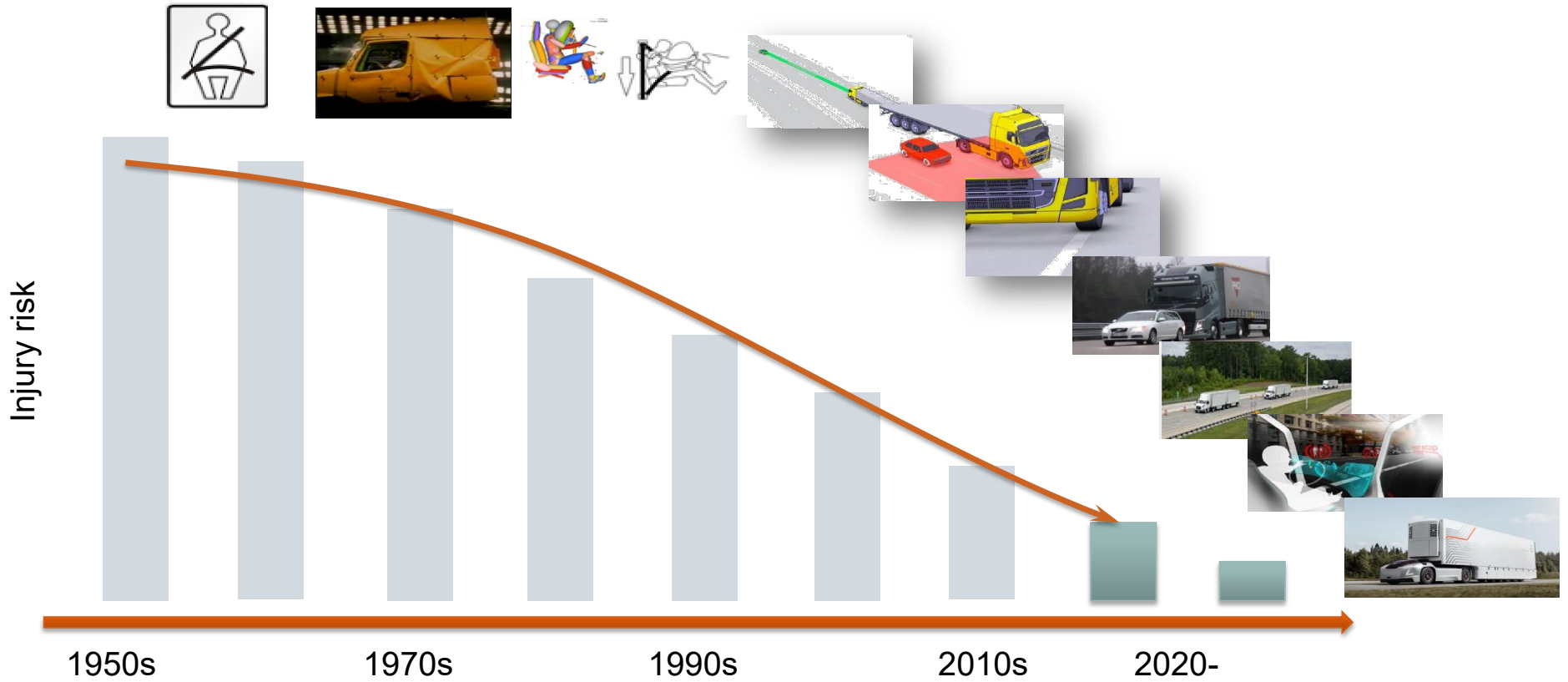


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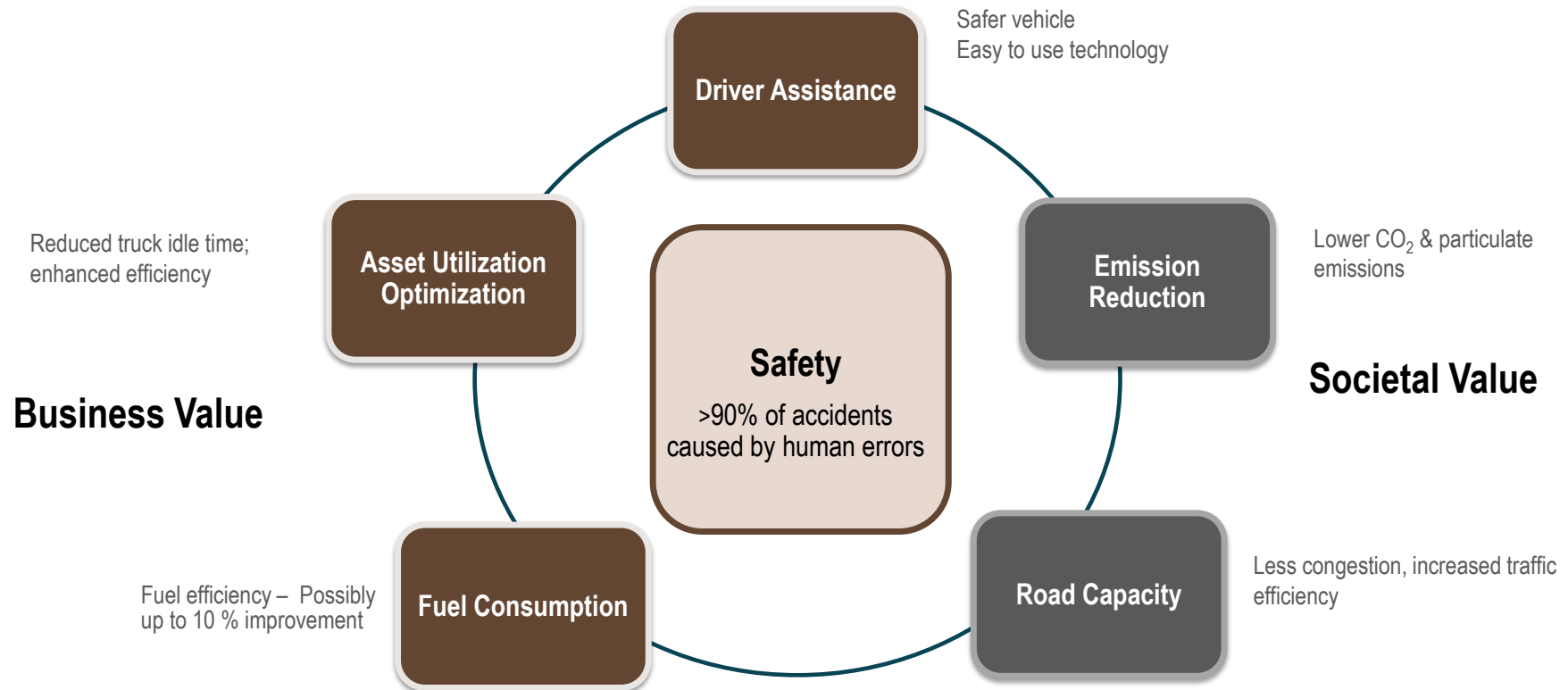
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The safety evolution: Passive > Active > Automation

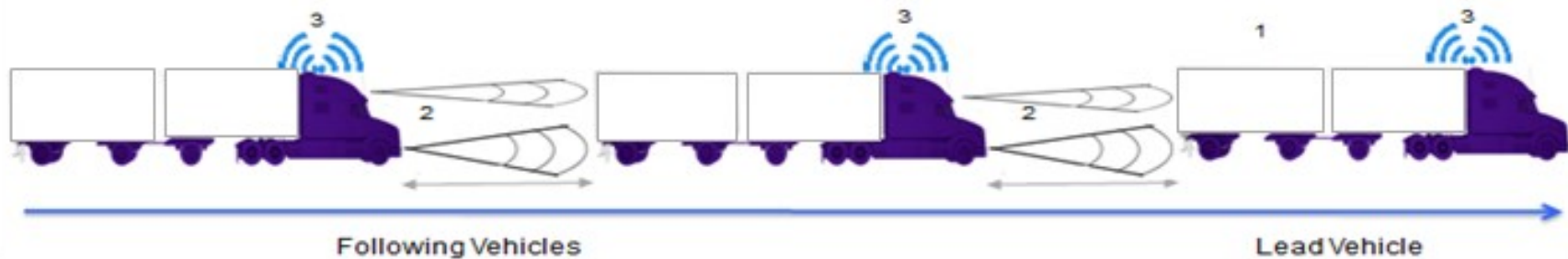


Platooning Has Safety, Business, And Societal Benefits



Platooning - Operational Overview

1. Lead vehicle: Sets speed with ACC
2. Following vehicles: Engage CACC and use camera and radar that "see" targets
3. Trucks communicate using DSRC to close the gap for a shorter following distance
4. Following vehicles brake much more quickly than humans when lead vehicles brake



ACC – Adaptive Cruise Control
CACC – Cooperative ACC
DSRC – Dedicated Short-Range Communication

Volvo Trucks and FedEx Successfully Demonstrated Truck Platooning on NC 540 (Triangle Expressway)

Volvo Trucks North America, together with FedEx and the North Carolina Turnpike Authority, used advanced driver assistance system (ADAS) technology to conduct on-highway truck platooning as part of ongoing research collaboration.

June 27, 2018



Volvo, FedEx test truck 'platooning' on public U.S. road

Volvo Trucks and FedEx demonstrate Truck Platooning

6/28/18
AB Volvo



FedEx Says Platooning Technology Could Revolutionize Truck Fleets

FedEx, Volvo Trucks form semi-automated convoy in test of platooning

Wayne Risher, Memphis Commercial Appeal Published 4:24 p.m. CT June 28, 2018

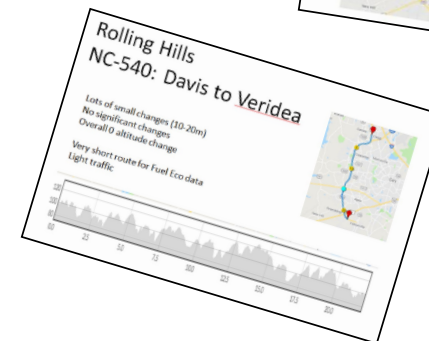
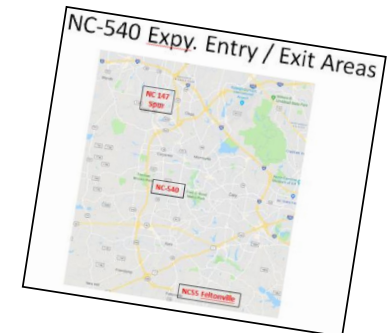
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Platooning – Activities on NC-540

- Conducting Development Work
 - Technical Performance Assessments
 - Platoon Gap Management –vs- Terrain, Speed, etc..
 - Traffic Interaction Assessments
 - Platoon Formation & Operation
 - More...
- Demonstrations with Targeted Groups
 - NC-DOT
 - Company Executives
 - Fleet Executives
 - Trucking Industry Trade Press

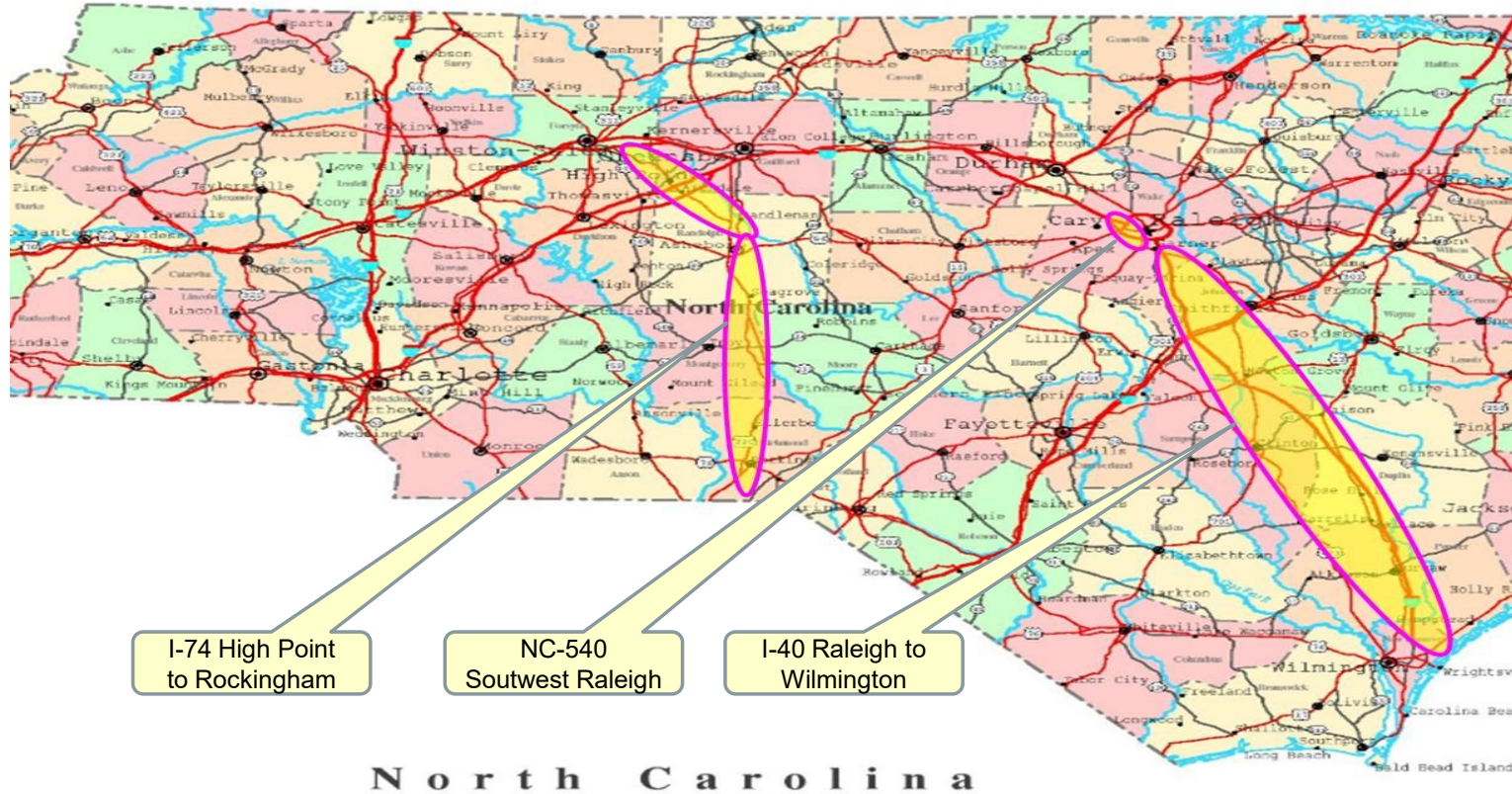


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Routes for Additional Development Work



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Platooning – Summary

Definition

- Communication Between Trucks To Allow For Cooperative Driveline Control And Safety

Technology

- V2X Communication, Radar, Camera
- High Integrity Safety

Customer & Society Values

- Improved Reaction Times > Safety, Fuel Savings, Improved Traffic Flow

Challenges

- Vehicle To Vehicle Across Brands & Fleets
- Safety Sets The Limits On Time-gap
- User And Society Acceptance Influence Time-gap And Platoon Length



THE END